Name:

p1105: Factoring when $a = 1$ (v3)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5. Focus on finding factor pairs of -24. Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 + x - 56$

2. Factor $x^2 + 16x + 64$

3. Factor $x^2 + 17x + 72$

4. Factor $x^2 - 3x - 54$

5. Factor $x^2 + 10x + 21$

6. Factor $x^2 + 7x + 12$

7. Factor $x^2 - 1$

8. Factor $x^2 + 5x + 4$

9. Factor $x^2 - 13x + 42$

10. Factor $x^2 - 14x + 45$

11. Factor $x^2 - 7x + 12$

12. Factor $x^2 - 9x + 14$

13. Factor $x^2 + 6x - 7$

14. Factor $x^2 + 4x - 5$

15. Factor $x^2 - 6x + 9$